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Breaking the Cycle: Women's Experience in Postsecondary Agricultural and Extension Education

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The “leaky educational pipeline” metaphor refers to the steady tapering off of women obtaining graduate degrees and reaching the level of a tenured faculty member, although the number of women earning college degrees has surpassed males since the 1980s. Women are disproportionately represented among faculty and leadership at land-grant institutions and in the agricultural education profession. The purpose of this study was to provide a synthesis of women’s experience in postsecondary agricultural and extension education (AEE) by describing the common and diverging challenges, opportunities, and mentoring experiences of women faculty and graduate students in the profession. The study was a textual narrative synthesis of two preliminary studies which provided an updated profile of the current organizational climate and mentoring experiences of women faculty and women graduate students in AEE. Three overarching themes with 11 categories emerged to summarize the experiences of women in AEE: (a) navigating a traditional academic system, (b) operating in a male-dominated discipline, and (c) influencing change in the profession. These findings challenge the AEE profession to critically acknowledge women’s experiences and begin looking outside academia for solutions to create a more inclusive organizational culture that values gender diversity.

Keywords: women, graduate students, women faculty, women in agriculture, critical inquiry, diversity, inclusion, agricultural education

Introduction

Extensive literature surrounds the “leaky educational pipeline” metaphor (Blickenstaff, 2005; Gasser and Shaffer, 2014; Massachusetts Institute of Technology, 1999; Pell, 1996), suggesting that over time, a steady tapering off occurs of fewer and fewer women who are involved in the sciences, are seeking and obtaining graduate degrees, and are reaching the eventual level of a tenured faculty member. When it comes to the number of women seeking college degrees, enrollment trends have been steadily

increasing, with total female enrollment numbers beginning to surpass male enrollment beginning in the 1980s (National Center for Education Statistics [NCES], 2017). In the fall of 2020, 58.6 % of all college students enrolled in the U.S. were female, with 64% of all master's degrees and 56.4% of all doctoral degrees awarded to women in 2018-2019 (NCES, 2018). However, while women have now matched and even surpassed men in terms of educational attainment, men have continued to constitute the majority of graduate degrees in engineering, mathematics and computer sciences, physical and earth sciences, and business (Bettinger & Long, 2005; Bradley, 2000; Okahana & Zhou, 2018).

A phenomenon noted with female graduate students is the increasing length of time it takes to complete a doctoral degree (Maher et al., 2004), particularly within the fields of education and other non-science and engineering degrees (National Science Foundation [NSF], National Center for Science and Engineering Statistics [NCSES], 2018). It is estimated that at least 40% of students who begin a doctoral program fail to complete it (Golde, 2005). This time constraint means a delay for women to enter the workforce and earn to their full potential, thereby perpetuating the cycle of gender parity in the labor market (Maher et al., 2004; Bradley, 2000). Some reasons attributed to this extenuating length of time include availability of funding opportunities, advising/mentoring relationships, adequate research preparation/opportunities, and individual student concerns about family and/or health issues (Maher et al., 2004).

In examining the prevalence of women who have managed to navigate the myriad challenges associated with remaining within the pipeline to reach the professorial ranks, researchers have found that women faculty tend to be concentrated in the assistant and associate professor ranks and only comprise 26.5% of tenured faculty at research institutions (Bilen-Green et al., 2008). Representation is even lower for women faculty at land-grant institutions; 23.7% of female faculty are tenured, and only 16.7% have achieved the rank of full professor (Bilen-Green et al., 2008). In terms of salaries, the most recent *Annual Report on the Economic Status of the Profession, 2021-22* (American Association of University Professors, 2022) reported that full-time faculty salaries for women were 81.9% of those for men in 2021-22, on average, with the gender pay gap reported as greatest at the full professor rank.

The pipeline narrows further still when examining the prevalence of women within the postsecondary ranks of the agriculture and natural resources disciplines. The inclusion of females into the predominantly male-oriented realm of agricultural education, specifically, has uncovered multiple barriers related to gender (Enns & Martin, 2015), namely that women have been significantly underrepresented (Foster & SeEVERS, 2003; Kelsey, 2006b; SeEVERS & Foster, 2003). In 2003, SeEVERS and Foster reported that 14.6% of the total membership in the American Association for Agricultural Education (AAAE) was women faculty. Examining the same association, a recent study on diversity and inclusion within the AAAE profession reported that out of 387 participant responses, 39.7% identified as female—a positive increase from 2003—yet over half the

profession still perceived low levels of progress toward diversity in the areas of race/ethnicity, institution type, religious orientation, gender/gender identity, socioeconomic status, and disciplinary focus (Estepp et al., 2022).

Foster (2001b, 2003) identified challenges or barriers experienced by female secondary agricultural education instructors related to acceptance by peers and other males within the agricultural industry, acceptance by administrators, and balancing family and career. Additionally, many female agricultural education teachers have faced criticisms from colleagues and administrators, sexual discrimination and bias, and inequity in terms of professional status and benefits (Baxter et al., 2011; Kelsey, 2006b, 2007; Seevers & Foster, 2003). Many women also believe they must work harder than their male counterparts in order to prove their competence in agriculturally-related subject matter and have often been overlooked as the point of authority (Seevers & Foster, 2003).

An additional factor attributed to women's late entrance into the field of agricultural education is a lack of strong female role models to advocate for advancement to higher educational levels (Enns & Martin, 2015; Seevers & Foster, 2003). Many women pursuing studies in a more male-dominated major are likely to face difficulties owing to a lack of female teachers to serve as role models (Hall & Sandler, 1982). Numerous studies have cited the need for the implementation of a mentoring system in order to help females overcome real or perceived barriers in agricultural education (Baxter et al., 2011; Foster & Seevers, 2003; Stephens et al., 2018).

Foster and Seevers (2003) provided a profile of women faculty in AEE by examining the challenges and opportunities experienced within the profession at the time. Additional studies focused on the factors contributing to success for women leaders and tenured faculty in AEE (Kleihauer et al., 2013; Murphrey et al., 2016). Influenced by these previous studies and in response to the noted increase in gender diversity within the profession, this study aims to expand the work of Foster and Seevers (2003) and subsequent studies conducted by Cline et al. (2019, 2020) by exploring the experiences of women graduate students and women faculty members within the AEE discipline through the lens of the leaky pipeline metaphor.

Purpose of the Study

The purpose of this study was to illuminate women's experience in postsecondary agricultural and extension education (AEE) by describing the current organizational climate and mentoring experiences for women in the profession. The study was conducted as a feminist qualitative inquiry (Brisolara et al., 2014; Jackson & Jones, 1998; Patton, 2015). One research question guided the inquiry: What are the common and diverging challenges, opportunities, and mentoring experiences of women faculty and graduate students in postsecondary agricultural and extension education? The Oklahoma State University Institutional Review Board approved the study protocol, and all participants provided consent prior to participation in the study.

Epistemological and Theoretical Perspective

We approached this qualitative inquiry from the epistemological perspective of constructionism. Through this lens, we determined truth to be what was created collectively between the individuals in our social context (Crotty, 1998). Meaning was defined as the collective experiences and truth of the participants as described in the findings. Feminist theory, defined as a “broad term that describes the application of feminist thought and ideas to a range of disciplines and discourses” (Brisolara et al., 2014, p. 3), served as the overarching theoretical perspective for this study. While Brisolara et al. (2014) asserted that there is no one unifying feminist theory, there are common concerns and goals, such as the nature and consequences of gender inequity, the establishment of equal rights and opportunities, and the ending of oppression. Further, Jackson and Jones (1998) challenge us to think of feminist theory less as an “abstract intellectual activity divorced from women’s lives,” (p. 1) but as seeking to explain the conditions under which women live. Additionally, we further contextualized meaning through the lens of feminist critical theory, which eschews the tenets of positivism and sense that the existing social order is inevitable (Brisolara et al., 2014) and purports change-oriented forms of engagement and action (Patton, 2015). Crucial to the aim of this study were the shared meanings among women faculty and graduate student experiences in AEE.

Methods

To describe the common and diverging challenges, opportunities, and mentoring experiences of women faculty and women graduate students in AEE, an attempt was made to follow the original survey research protocol outlined by the studies of Fosters and Seevers (2003; Seevers & Foster, 2003). We adapted the original questionnaire for electronic administration through the Qualtrics survey platform. The questionnaire contained five sections related to (a) educational and professional background, (b) current professional status, (c) mentoring, (e) professional treatment, and (f) demographics, each with Likert-type and open-ended questions. Female and male faculty members in AEE from multiple universities served as a panel of experts to assess face and content validity of the questionnaire. This feminist inquiry centers on the responses to 10 open-ended questions in the mentoring and professional treatment sections using qualitative analysis; therefore, instrument reliability is not addressed.

Common themes and patterns to describe the experiences of women faculty and women graduate students in AAAE were determined following basic interpretive qualitative methodology (Merriam, 2002). More than 700 responses to the open-ended questions were analyzed independently by the researchers, then reconciled as a research team. Concept codes were used as the first cycle coding method to reflect the broader social constructs in the data and are considered of value to studies in critical theory (Saldaña, 2016). To prepare for second cycle coding, the researchers used code mapping to compare initial concept codes, enabling categories to emerge by “comparing and sorting ... to determine which ones seem to go together ... and potentially transform your codes

first into organized categories, and then into higher-level concepts” (Saldaña, 2016, pp. 220–222). Several iterations of pattern coding were then followed to narrow emergent concepts. Final analysis resulted in three overarching pattern themes with 10 categories. To establish trustworthiness, we followed Lincoln and Guba’s (1985) criteria of credibility, transferability, dependability, and confirmability. Credibility was maintained through prolonged engagement with the data and multiple peer debriefing sessions to discuss codes and patterns (Lincoln & Guba, 1985; Saldaña, 2016). Transferability and dependability were ensured by analyzing the positionality of truth and maintaining member’s voice. While many commonalities in experience were apparent in our data, we did attempt to reveal when divergent views among the women faculty and women graduate students existed to not imply universal or majority viewpoints in our analysis (Lincoln, 1995). Analytic memos were maintained by the researchers and reflected on during the entire coding process to establish confirmability (Saldaña, 2016).

Participants

The population for the study consisted of all women faculty and graduate studies in agricultural and extension education programs. The 2017 American Association of Agricultural Education (AAAE) member directory provided an initial list of 216 women (37.8% of the total membership). University websites listed by AAAE as having an agricultural education, communication, extension, leadership, or similar program were searched to identify AEE women not included in the AAAE membership; an additional 83 participants were identified. It was important to include AAAE and non-AAAE members from agricultural education, extension, communications, and leadership as participants to conduct a census ($N = 299$) of women representing the extensiveness of postsecondary agricultural education (Barrick, 1993; Mannebach, 1990; Newcomb, 1993). Sixteen women (5.3%) opted out of the study. We agreed to remove questionnaires less than 50% completed a priori and removed 14 (4.7%). A response rate of 51.2% was achieved ($n = 153$). Non-respondents were contacted by phone to solicit completion of the questionnaire. Eight additional women (5.5% of the non-respondents) completed the questionnaire. Differences between early and late respondents were not detected (Lindner et al., 2001). An overall response rate of 53.8% ($n = 161$) was reached.

In describing the study’s participants, most women faculty were assistant (31.6%; $n = 36$), associate (19.3%; $n = 22$), or full (14.9%; $n = 17$) tenure-track professors. Twelve percent of the women faculty ($n = 14$) were Extension educators or specialists. The remaining women faculty identified their current university position as instructor or lecturer (18.4%; $n = 21$). Thirty-two (68.1%) women graduate students were graduate assistants at the time of the study. Sixty percent ($n = 130$) of the women membership in AAAE for the year 2017 were represented.

Statement of Subjectivity

Qualitative research is an inherently subjective perspective (Peshkin, 1988), and as such, we acknowledge the potential influence of our personal perspectives related to this study. The need for this study was supported by our own individual experiences in AEE at the postsecondary level as female agricultural leadership graduate students, instructors, and faculty. Our first-hand experiences in the AEE profession have varied and are as complex as the participant's stories reflected in the findings; because of this, we strive to conduct research that will foster inclusion in the profession. Additionally, we recognize the influence of societal women empowerment movements since 2017 and the impact it may have on the interpretation of the data. We were diligent to mitigate biases before, during, and after data collection and interpretation by noting, discussing, and challenging our biases throughout the process. The findings of this feminist inquiry fully reflect our collective interpretation of the perceptions and experiences of women faculty and graduate students in postsecondary AEE.

Limitations

Generalization of findings is not suggested in qualitative research (Patton, 2015), and readers are encouraged to determine transferability of the findings within their context. The synthesis lacks contextual information because of the methodological design of the preliminary studies and the constraint of resources to conduct follow-up one-on-one interviews or focus groups with women. It is also noted that while the questionnaire was administered as a census among women faculty and graduate students in AEE, the entire population did not respond.

Results and Discussion

Three overarching themes with 10 categories emerged during the qualitative analysis to summarize the common and diverging experiences of women faculty and graduate students in postsecondary agricultural and extension education: (a) navigating a traditional academic system, (b) operating in a male-dominated discipline, and (c) influencing change in the profession. Direct quotes from the participants are included to support the emergent themes. Confidentiality was maintained by removing potentially identifiable information.

Navigating a Traditional Academic System

A major theme to arise from the feminist inquiry of women's experiences in postsecondary AEE was descriptions of the challenges faced when navigating a traditional academic system. Three related categories interpreted as (a) professional success at the expense of personal well-being, (b) challenges to achieve work-life integration, and (c) disincentivized career paths summarize the major barriers faced by women in postsecondary AEE. One faculty member stated, "Our conceptualization[s] of

leadership have changed a great deal over the years and are more welcoming to women. However, in our field, change is slow.”

Analysis of the open-ended responses revealed a pursuit of professional success at the expense of their personal well-being. Participants voiced deep concern for the toll demands in the AEE profession take on the personal lives of women faculty and graduate students. While faculty attributed the demands of the profession to the promotion and tenure process, graduate students voiced concern about the unrealistic expectations placed on them to perform in graduate school. It was a shared sentiment between the women that perceived requirements for professional achievement in the academic system could and may have already led to significant personal neglect and concern for mental health. The women, whether graduate students or faculty, felt a perceived need to be “twice as good” to be viewed as competent and capable in the profession.

Whether viewed as a barrier to success or an attainable goal, women faculty and graduate students in AEE also felt challenged to achieve work-life integration as professionals in the academic system. Women faculty shared the complexities of integrating their professional lives with their personal lives, with some more satisfied with their experiences than others. The graduate students were observant of the challenges faced by women faculty members and were not naive to the reality of second-shift responsibilities common among women in academia. The necessity for women in AEE to have a dedicated support system to succeed was ubiquitous. Many of the women faculty and graduate students rationalized challenges with work-life integration by maintaining the hope that their choices would pay off further in their academic careers.

Another barrier expressed by the women faculty and graduate students was a disincentivized career path in the academic system at both the macro and micro levels. Given the increasing demands and resulting trade-offs in the profession, many women vocalized concern for the sustainability of faculty members in postsecondary AEE, regardless of gender. As one student stated, “the professional demands of work coupled with second shift responsibilities are a recipe for disaster and increased attrition rates.” A portion of faculty and graduate students were satisfied with their chosen career path and accepted the challenges they experienced. However, the remaining women either expressed sincere regrets for their professional choices or strong apprehension about pursuing a career in academia. The challenges expressed in the earlier categories of navigating a flawed academic system (professional success at the expense of personal well-being and feeling challenged to achieve work-life integration) contributed to the women’s mild disenchantment with academia. Factors such as poor leadership, toxic workplace environments, a commitment to the status quo, and the amount of red tape and “hoops” to jump through disincentivized graduate students’ desire to pursue a career in postsecondary AEE, while also causing some faculty to question tenure in the

profession. A graduate student said she witnessed “women navigate this [the academic system] successfully, but it seem[ed] a daunting task.”

Operating in a Male-Dominated Discipline

The second major theme to arise from the narrative synthesis of women’s experiences in postsecondary AEE was the reality of operating in a male-dominated discipline. The women’s experiences in AEE as a male-dominated discipline resulted in three distinct categories describing the reality of (a) gendered stereotypes and biases, (b) exclusion, and (c) an emotional tax.

Participant responses suggested gendered stereotypes and biases are still prevalent in postsecondary AEE based on the visceral experiences shared by women faculty and graduate students. The perception of an imbalance of power among genders in the profession was suggested as the discrepancy between a majority female student body and a predominantly male faculty, and administration was mentioned often. Women participants also reflected on specific instances they believed they were denied opportunities, responsibilities, or professional respect because of their gender. The traditional male expectations of the profession led some graduate students to feel as though feminine approaches to agricultural and extension education were not valued. “Agriculture and academia are both male dominated. Some men simply do not treat women as equal, especially smart, accomplished, independent women,” reported a participant. It was perceived that approaching postsecondary AEE with unique or innovative styles beyond the dominant masculine traditions was a risk women could not afford if they wanted to be successful leaders or achieve tenure in the profession. Graduate students revealed both overt and covert sexist remarks they had experienced and not knowing how to handle them. Women graduate students had been accused of pursuing graduate degrees in agriculture only to “find a farmer husband” or having their credibility degraded when implying marital status.

Perceived exclusion was another significant barrier for women in postsecondary AEE because of operating in a male-dominated discipline. It was common for faculty and graduate students to share first-hand experiences of being excluded from social and professional networking opportunities by male tenured faculty members. Women faculty were discouraged from attending AEE conferences and cited many instances when female faculty were excluded by male faculty (whether perceived as purposefully or not). The women seemed to resent an invisible standard of the AEE organizational culture that approached professional interactions between genders cautiously and conservatively. One participant described the repercussions of this standard:

Male peers of mine have received different treatment, seemingly because of their gender and that they can fit into the “good ol’ boys club.” It seems that quite a few men in our profession belong to this club with invisible rules, but it does seem advantageous to be white, male, from a rural setting, and ... to be a

member of this club ... it does seem that my peers who have membership in the good ol' boys club have been given preferential treatment compared to myself.

Some participants also felt the masculine nature of the profession influenced exclusive behavior, such as unhealthy competition and backstabbing between women. "I do not want to work in the same type of cut-throat environment I encountered during my Ph.D. program where women tore each other down. Nor do I want to create that environment for women coming in behind me," stated a participant.

This analysis of women's experiences in postsecondary AEE prompted consideration of the heavy emotional tax, or constant state of being on guard against potential biases, many women were carrying while operating in a male-dominated discipline. Gender biases "seem to be magnified in this field," shared a participant. These perceived biases resulted in women faculty and graduate students feeling the pressure to be "twice as good" to avoid being marginalized, overlooked, or disregarded in the workplace. Numerous examples of the faculty and students' professional and technical competencies being actively and passively questioned were shared. As one participant stated, many women learned to "deal with the patriarchy institutionalized in the system of academia" to handle the frequent microaggressions, sexist comments, condescending remarks, policy violations, and hostile workplace cultures that were a reality of their lived experiences. A faculty member shared

I have been approached many times while at professional workshops or industry conferences where individuals automatically assume I am only in attendance because I am with my husband, even though I am not married, and I am there completely on my own.

Influencing Change in the Profession

The third significant theme of influencing change in the profession helps describe women's experiences in postsecondary AEE. The changes inspired by the women are categorized as (a) promoting authenticity, (b) challenging systems, (c) empowering women, and (d) pursuing intentional mentorship.

In describing their experiences as women in postsecondary AEE, a sense of fulfillment and satisfaction from their work resonated among the participants. Faculty felt a responsibility to represent the profession authentically with honesty and transparency. Graduate students sought increased collaboration opportunities with faculty for their personal and professional improvement. It seemed women in postsecondary AEE valued authenticity in the workplace and yearned to see the profession's organizational culture shift in this direction with more honest and transparent interactions between colleagues and students.

Apparent when analyzing the open-ended responses was the change women in postsecondary AEE advocated for by challenging the existing social system of the

profession. Faculty and graduate students referenced a disproportionate representation of women faculty in leadership at the AEE programmatic and larger levels of academia. The participants emphasized the need for an increase of tenured women in the profession to serve as positive role models for the majority female graduate and undergraduate students in AEE programs:

I have encouraged women to be involved in the development of programs related to leadership and to mentor other women. Our conceptualization[s] of leadership have changed a great deal over the years and are more welcoming to women. However, in our field, change is slow. We need more female role models to show young women that we belong in the profession and that we have important contributions to make.

Women also tried to use their influence to create a more inclusive work environment by combating a perceived unhealthy level of competition among colleagues in postsecondary AEE. The desire for more collaboration and inclusive networks of professionals demonstrated a need for strategic efforts developed and led by women in AEE at the academic level. The participants consistently challenged more women to pursue leadership roles to diversify and change AEE's organizational culture by infiltrating existing systematic structures.

Graduate students and faculty were like-minded with the perceived importance of empowering women to influence change in the AEE profession in the two preliminary studies. However, differences in attitude toward how the empowerment of women in AEE should be approached existed between the studies. The women faculty's perceived need for empowerment among women in the profession appeared pragmatic and slightly jaded, as represented by the frequently referenced Madeleine Albright (2006) quote, "there's a special place in hell for women who don't help each other." On the other hand, the graduate students felt the need for empowerment among women in the AEE profession as mandated. Creating a positive work environment, a sense of community, and unity among women in the profession were common ways the participants sought to empower women and influence change in postsecondary AEE.

In summary, the mentoring experiences of women in postsecondary AEE were valued and positively described, but a desire for more intentional mentorship among women in the profession was shared. Mentoring was valued by the women regardless of their mentor's gender. Just as the faculty noted the significance of tenured faculty's mentorship in their academic success, graduate students acknowledged the significant role encouragement from faculty played in their success during graduate school. However, the graduate students felt reciprocal mentoring among peers was of most benefit to women graduate students during their graduate studies. The faculty also identified the largest need for mentorship as intentional efforts between new women faculty and more tenured women faculty, without much mention of mentoring graduate students. Conversely, the graduate students agreed on the need for more women faculty at various tenured levels to invest intentionally in the mentorship of women graduate

students. Yet, the women from both preliminary studies shared the desire to pursue intentional mentorship as an act of service and a means to change the AEE professional experience for women. A graduate student reflected, “I have had the benefit of excellent mentors, both men and women, who have provided direction and opportunities in my career. I highly believe in paying those experiences forward.” A faculty member shared similar sentiments:

I have benefitted from a variety of mentors and friends. People had already walked the path I chose and people who walked by my side down this career path. I do not believe I would have survived, let alone achieved any success at all without their help. ... Truly this has not been a path I walked alone.

Summary

In synthesizing the findings through a feminist lens, the complexity of the participants' experiences described in this study is acknowledged. No experiences of any two women in postsecondary AEE were alike, and perceptions varied in the degree they navigated a traditional academic system, operated in a male-dominated discipline, and influenced change in the profession. The perceived challenges to achieving work-life integration and sacrificing personal well-being to reach professional success were identified as major barriers contributing to the traditional academic system's lack of attractiveness as a viable, long-term career path for women. Gendered stereotypes and biases were identified as still pervasive in the AEE discipline, with many women either observing or having experienced felt exclusion in the profession by male colleagues. For many women in the profession, the awareness of the impact their gender had on workplace activities and the constant need to prove oneself to be respected was emotionally taxing. Despite these barriers, many women in postsecondary AEE were committed to changing the organizational culture of the profession. Women in AEE were challenging the male-dominated profession by seeking more leadership opportunities, questioning old workplace policies, supporting women in the pipeline to continue in academia, and pursuing intentional mentorship developed for women in the profession.

The leaky educational pipeline metaphor (Blickenstaff, 2005; Gasser & Shaffer, 2014; Massachusetts Institute of Technology, 1999; Pell, 1996) is still relevant today, particularly within the field of agricultural and extension education. Feminist theory is characterized by the common concerns and goals of achieving gender equity, establishing equal rights and opportunities, and ending oppression (Brisolara et al., 2014). By examining women's lived experiences within the AEE profession, we sought to explain the conditions under which women live (Jackson & Jones, 1998), giving voice to both their challenges and opportunities. We now seek to propel the change-oriented forms of engagement and action (Patton, 2015) called for by both women graduate students and faculty to level the playing field and provide equilibrium to the profession. As Gloria Steinem, an American feminist journalist and advocate, said, “A feminist is anyone who recognizes the equality and full humanity of women and men” (Sieling, 2014).

This description of women's experiences has significant implications for the future of the AEE profession as we strive to build a more inclusive culture among faculty and graduate students. When considering our findings with previous research (Baxter et al., 2011; Cline et al., 2019, 2020; Enns & Martin, 2015; Foster & SeEVERS, 2003; Hall & Sandler, 1982; Kleihauer et al., 2013; Murphrey et al., 2016; SeEVERS & Foster, 2003; Stephens et al., 2018), it appears that although the profession is making progress through increased representation of women in agricultural and extension education, the organizational culture of AEE does not appear to support gender diversity in the workplace as well as we had hoped when we began this project. Acts of gender-based marginalization described from previous decades by women faculty are still occurring today, as proven by the similar experiences of women graduate students at the time of this study.

We also recognize, as pointed out in many studies (Bilen-Green et al., 2008; Cabrera, 2009; Maher et al., 2004), the concern for gender equity among faculty extends beyond the agricultural and extension education discipline and is prevalent throughout most areas of academia. The answers to addressing this problem are multi-dimensional and complex; we should begin to look outside our departments, and perhaps outside of academia all together, for answers on how to create a more equitable work environment for women. Investigating corporate efforts that have leveled the playing field for women in the workplace may serve as models for our departments to follow.

It is vital that the agricultural and extension education profession recognize this cycle and that gender-based discrimination in the workplace has not ceased. Cultural norms of a profession can be both invisible and pervasive, which lends to their continuation from generation to generation in the workplace, regardless of shifts in societal values. As a result, if the norms and values of an organization that marginalizes or lessens opportunities for an underrepresented group are to change, they must be identified, addressed, and mitigated directly by the members. The AAAE membership and leadership should use the findings from this study to critically address why such behavior is continuing to permeate the profession from a systematic perspective. More intention should be focused on including and engaging women (and all underrepresented groups) in *all* levels of the AAAE organization to ensure representation and voice if the agricultural and extension education profession is to move forward toward true inclusion. The women entering the profession appear to have a powerful sense of optimism toward the profession and are motivated to influence change; AAAE should capitalize on this shift by providing more opportunities for young professionals to serve in leadership roles and in spaces where a diverse set of perspectives can be shared.

An overarching recommendation for future research includes the continued examination of the challenges and opportunities experienced by women faculty and graduate students within the AEE discipline from a longitudinal perspective. It is significant to note that data for this study were collected prior to the outbreak of the COVID-19

pandemic in 2020; therefore, the authors recommend examining trends within the constructs of postsecondary enrollment, graduate graduation rates, the percentage of degrees conferred by gender, and the percentage of graduate students progressing to the ranks of full-time faculty at degree-granting postsecondary institutions. Additionally, a continued examination of gender pay gap trends within the professorial ranks, as well as an increased progression toward higher levels of diversity and inclusion within academia, particularly the discipline of agricultural and extension education, is needed.

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